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THE IMPORTANCE OF LANGUAGE APTITUDE ASSESSMENT: WHY AND HOW?

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Abstract

A considerable amount of research has been carried out within the field of Second Language Acquisition (SLA) in relation to the study of Individual Differences such as motivation, attitude, personality, intelligence, and aptitude to identify the outstanding traits relevant to the mastery of an L2/FL. Far less research has investigated the impact of language aptitude. There are tests out there to measure language aptitude, for different purposes. Each country should have its own language aptitude test that suits at least to its official language(s).

Keywords: *Second language acquisition, language aptitude.*

INTRODUCTION

Very high-level, functional ability in foreign languages is increasingly important in many walks of life. It is also very rare, and likely requires an early start and/or a special aptitude. Results from a number of recent studies suggest that native-like adult second language (L2) learners possess a high degree of language learning aptitude, the positive effects of which may have compensated for the negative effects of a critical period in these learners. According to the same studies, child learners seem to attain a native-like command of the L2 regardless of high or low aptitude, which has led researchers to conclude that this factor plays no role in early acquisition.

The results confirm previous research suggesting that a high degree of language aptitude is required if adult learners are to reach a L2 proficiency that is indistinguishable from that of native speakers. However, in contrast to previous studies, the present results also identify small yet significant aptitude effects in child SLA. Findings conclude that the rare native like adult learners sometimes observed would all turn out to be exceptionally talented language learners with an unusual ability to compensate for maturational effects and, consequently, that their native likeness per se does not constitute a reason to reject the critical period hypothesis.

When native speakers occasionally encounter adult L2 learners of their language who seem to speak it without a noticeable foreign accent or other signs of linguistic non nativeness, they most often look up to such rare individuals with some admiration, or even envy. Indeed, because these learners began to acquire the L2 as adults, few would hesitate to characterize them as linguistically talented or gifted. Such a propensity for picking up languages has frequently been framed and investigated within psychological research on aptitude.

Aptitude is an important predictor of success in explicit learning, whereas attitudinal factors better predict the outcome of implicit acquisition. In fact, it went so far as to claim that aptitude is irrelevant to language acquisition because unconscious and implicit rather than conscious and explicit processes are at work in natural language development. Some recent studies have

suggested, however, that language aptitude may play a decisive role in naturalistic SLA—and perhaps an even more decisive role than it plays in instructed SLA—because acquiring a language implicitly, by having to discover grammatical regularities and phonetic patterns merely from language exposure, can be seen as an even greater challenge than learning it through pronunciation tutoring and explicit grammar instruction.

How, then, does language learning aptitude relate to the phenomenon of native like or near-native L2 ultimate attainment by adult learners? When it is made his 5% estimate of completely native like adult learners, he also argued that these learners are unique because they make use of psychological processes in their learning that are quite different from those used by the ordinary learner. He therefore suggested that these learners need not be considered at all in a theory of interlanguage. The idea that exceptionally successful adult learners are in some sense unique and different from average learners was made explicit by Bley-Vroman (1988, 1989), whose fundamental difference hypothesis stated that whereas children acquire language through implicit, domain-specific mechanisms, adult learners have lost most of their ability to acquire languages implicitly and are left instead with their general problem-solving strategies and processes when faced with the task of acquiring a L2. Given that these general cognitive functions are not designed specifically for language acquisition, virtually no adult learner should ever master a L2 entirely.

Still, if such mastery does in fact happen, in rare cases, this could be given the same “pathological status” as the exceptional phenomenon of children failing to fully master their first language. Expressed in more moderate terms, if a general and—for the purpose of acquiring languages—less efficient system takes over at a certain age in all learners, the apparent exceptions to the critical period should be expected to possess an extraordinary verbal analytical ability i.e. language learning aptitude.

This trait, shared only by a small minority of learners, would thus allow for a greater amount of explicit and conscious reflection on grammatical structure during acquisition, which, in turn, potentially compensates for the biological disadvantage of having begun SLA beyond childhood.

This paper discusses the extent to which aptitude for learning are important for long-term L2 achievement. This paper argues research is needed into these in order to identify ‘complexes’ of abilities or ‘aptitudes’ for ‘types’ of situated pedagogic activity. An aptitude battery that assessed strengths and weaknesses in such complexes would be of great diagnostic value in matching learners to optimal learning contexts. Currently available aptitude tests cannot be used to this end, and so new aptitude batteries must be developed.

THE IMPORTANCE OF LANGUAGE APTITUDE

Language learning aptitude is generally defined as a largely innate, relatively fixed talent for learning languages. This individual factor varies considerably within normal populations and has been found to be relatively independent of other factors, including general intelligence, personality, attitudes toward the language to be learned, and the motivation to learn it.

Aptitude for second or foreign language learning is the ability to successfully adapt to and profit from instructed or naturalistic exposure to the L2. Attention allocation, control, rehearsal in memory, self-regulation, analogical reasoning and many more processes combine to facilitate adaptation and learning in instructed settings, and during participation in instructional tasks. The cognitive processing, emotional and behavioural challenges various settings and tasks pose draw on subtly differentiated clusters of abilities and other personal factors.

Although language aptitude and intelligence overlap to some extent, as shown by either low to moderate or moderate to strong correlations, they still exhibit different correlations with L2 outcomes (Wen & Skehan, 2011). Recent second language acquisition (SLA) research into the cognitive abilities implicated in implicit, incidental, and explicit learning, and in learning and performance on tasks differing in their information processing demands has prompted new theoretical frameworks for conceptualizing L2 aptitude. This research is reviewed and related to measures of abilities operationalized in existing aptitude tests, as well as to measures of abilities that are the focus of more recent research in cognitive psychology. Finally, prospects for developing aptitude tests to serve the purposes of predicting both early and advanced level language learning success are discussed in the light of the SLA findings and aptitude frameworks reviewed.

Second language (L2) learning aptitude is characterized as strengths individual learners have—relative to their population—in the cognitive abilities information processing draws on during L2 learning and performance in various contexts and at different stages. Theoretical frameworks for aptitude research, characterized in this way, have been proposed recently (Robinson, 2009; Wen & Skehan, 2011).

Recent research on the language analytic component of L2 aptitude also suggests that there is separation between the language analytic aspects of aptitude and intelligence. However, in older L2 learners, such as high school and university students, intelligence and language analytic ability are more closely related (Wen & Skehan, 2011). These findings suggest that there are distinct subcomponents of L2 aptitude.

Where learners are selected who are weak in some capacities for L2 processing, then the resulting subtest profile can be used to support areas of weakness through supplementary, more structured and extensive practice activities.

Both Robinson's and Skehan's models can therefore form the basis of an aptitude test whose primary function is selection, but both also have diagnostic value, which can be used to identify areas of needed support in processing for L2 learning. However, beyond this it is not clear whether Wen and Skehan's proposed aptitude test could be used to match learners to more specific options in classroom activity, such as decisions about optimally learner effective focus on form techniques, or decisions about matching learners to optimally effective task types during accuracy, fluency and interaction practice in communicative classrooms. That is, Wen and Skehan take different stages of global L2 information processing, rather than the specific conditions of instructed L2 exposure, as his operational platform for proposing aptitude components. In contrast, considerations of the relationship of aptitude(s) to the specific conditions of instructed L2 classroom exposure and options for pedagogic interventions within them are the major motivation and operational platform of Robinson's framework.

The Ability Differentiation Hypothesis claims that some L2 learners may have more clearly differentiated abilities—and so strengths in corresponding aptitude complexes—than others, and further that it is particularly important to match these learners to instructional conditions, and conditions of practice which favour their strengths in aptitude complexes, in contrast to other learners who may have less differentiated abilities, and equivalent strengths and aptitudes for learning under a variety of conditions of exposure and classroom practice. Both of the models of aptitude described above, complementary as they are, though with different emphases, offer researchers the opportunity to engage with aptitude test development in a way that incorporates findings from SLA and cognitive psychology.

It is not clear, that is, precisely what instructional options and practice activities experienced in the lengthy communicative and immersion programs were facilitated by learner aptitude (as measured), and which were not. The experimental studies reviewed above do suggest that incidental learning is not well predicted by the MLAT, or LABJ.

Wen and Skehan (2011) observed that research on second/foreign-language (L2) aptitude has "languished" over the last three decades. He speculated that aptitude research had generated little interest because of its "perceived irrelevance to L2 acquisition in communication contexts" (p. 69). Previously, Wen and Skehan (2011) had proposed that the concept of L2 aptitude has been unpopular because of its implicit assumptions that a special talent exists for language learning—that learning a language is different from learning other skills. Furthermore, he proposed that language aptitude is stable over time; that is, aptitude is not influenced significantly by the environment after the early years. He has also argued that L2 aptitude is composed of different subcomponents, all of which are necessary for language learning.

Wen and Skehan (2011) proposes that the components of aptitude for instructed learning must be differentiated according to the SLA processing stage they correspond to and he identifies four broad stages; noticing the input; patterning the input to facilitate further analysis and generalization; controlling the analysed knowledge in production; and lexicalizing, or variegating the patterns learned to suit different communicative, and situational contexts.

Wen and Skehan's programmatic proposal suggests that some components of existing aptitude tests may be useful for capturing the abilities involved at different stages of L2 processing, but that—

as has been stressed throughout this chapter—further development of complementary subtests will be necessary.

Wen and Skehan's model thus has potential diagnostic value, which can be used to identify areas of needed support in processing for L2 learning. Robinson, adopting the interactionist approach of identifies a number of 'aptitude-complexes' or combinations of cognitive abilities that are differentially related to processing under different conditions of instructional exposure to L2 input, and therefore that strengths in one or another of these complexes of abilities can be expected to be important to learning from one instructional technique, or under one condition, versus another. Robinson's model of L2 aptitude for instructed learning is an attempt to specify the information processing details of this observation, and to relate them to current issues in SLA theory and pedagogy.

Robinson's framework describes aptitudes for learning and practice as variegated, but constrained by a theory of the learning situations they operate in. The essential principles (aptitude complexes and ability differentiation) of Robinson's framework could therefore be applied in developing measures of aptitudes for performance and learning during practice on tasks which increase in complexity along different resource-directing, and resource dispersing dimensions. Such future research would do much to illuminate the extent to which learner perceptions of the difficulty of the task inhibit, or accentuate task-based language processing, and provide a basis for matching learners' patterns of abilities to those types of practice.

Speculating language aptitude is important for understanding why some students acquire an L2 more easily than others. These studies provide support for their hypotheses that the differences between stronger and weaker L2 learners are largely language related and that L2 learning problems are due to learners' strengths and weaknesses in the subcomponents of language aptitude

One reason that the componential nature of L2 aptitude tests has not been studied closely is the notion that aptitude may not be relevant for SLA, especially in communicative contexts. For example, in his review of L2 aptitude research, Skehan (2011) cited researchers who have suggested that aptitude has its effects primarily on L2 classroom learning. However, researchers have found that scores on L2 aptitude tests correlate strongly with L2 performance in both explicit and implicit learning conditions. In one study, Robinson (2009) found strong correlations between aptitude measures and L2 learning in instructed, rule search, and implicit learning conditions. These studies suggest, then, that aptitude may be relevant for language learning in both explicit and implicit contexts.

Throughout the 1990s, Sparks and his colleagues conducted additional studies, all of which showed that students with stronger L1 skills exhibited higher scores on L2 aptitude tests (MLAT) and stronger L2 achievement (i.e. course grades) than students with weaker L1 skills. In yet other studies, they found that students with stronger L1 skills and higher L2 aptitude on the MLAT exhibited significantly stronger scores on measures of oral and written L2 proficiency.

Other longitudinal studies they have conducted with different populations of high school L2 learners have revealed strong relationships between early L1 skills and L2 aptitude and L2 proficiency. One reason for the unpopularity and lack of research relating to the L2 aptitude concept has been that aptitude researchers make the assumption that language is special; that is, they propose that a talent exists that is specific to language learning (Wen & Skehan, 2011). In contrast, researchers who view language learning ability as similar to the learning of other skills propose that the abilities that facilitate language learning are the same as those in any other learning task.

Taken together, the findings for a positive relationship between phonetic sensitivity, memory ability and learning from recasts in Robinson (2009) study, and phonological WM, noticing of recast information, and subsequent L2 development suggests that these very similar abilities are positively implicated in aptitude for learning from the recasting FonF technique. However, as with the finding for incidental learning in the Robinson (2009) study reported above in Robinson (2009) there were low, no significant correlations of learning of relative clauses during task-based meaning focused interaction (supplemented by targeted recasts) and the GS aptitude subtest

As Wen and Skehan (2011) argued that no doubt the subtests of MLAT and similar aptitude batteries such as Pimsleur's PLAB, or Sasaki's LABJ, do capture some of the abilities that contribute to learning in contemporary communicative and immersion classrooms. Studies have also shown that the GS subtest of MLAT is a particularly good measure of metalinguistic ability, and that scores

on it, interestingly, correlate significantly and positively with L2 learning by post-critical period learners, but not with learning by those with substantial amounts of pre-critical period exposure to the L2 (DeKeyser, 2000).

Clearly, the research reported has begun to uncover relationships between IDs in aptitude (even using only subtests of conventional aptitude batteries, such as MLAT) with awareness and subsequent L2 learning under a variety of closely controlled experimental learning conditions. In summary, the frameworks for research, accumulating findings, and research agendas prompted by these at the three levels of instructional context described briefly above are promising for those concerned with basing pedagogic decision making about optimum L2 learning conditions, task types, and FonF interventions on an empirical footing. What is additionally needed is research into the interaction of instructed L2 learning—under different conditions of exposure, via different FonF techniques, and via practice on different types of task at different levels of complexity—with IDs in the cluster of abilities contributing to aptitudes for those specific L2 learning conditions, techniques and tasks.

As with the laboratory research described above, these findings suggest that learners may differ in their aptitude(s) for learning from one FonF technique versus another during opportunities for communicative practice—an issue addressed again in the section below on contemporary approaches to aptitude and their implications for matching L2 learners to optimum conditions of exposure and practice.

Early bilinguals who start acquiring the L2 in an immersion context before age 6 were hypothesized not to be fundamentally different from NSs in terms of learning mechanisms (although they may still differ in ultimate success), whereas late bilinguals who start acquiring the L2 as adults (after age 16) should be fundamentally different from NSs in terms of learning mechanisms (and also different in ultimate success). Following DeKeyser's (2000) claim that any relationships between individual differences in language aptitude and learning outcomes constitute potential evidence for differences in learning processes, the present study examined whether individual differences in cognitive aptitudes hypothesized to play a role in either implicit or explicit learning relate to variation in L2 attainment in early and late L2 learners, as measured by tasks that allow controlled use of knowledge or that require more automatic use of knowledge.

Second language acquisition studies of early and late learners have consistently demonstrated a more or less strong negative correlation between age of onset of acquisition and ultimate attainment of second language proficiency. Not only does this finding closely correspond to the layman's observation that children acquire languages more efficiently and with greater success than adults, but it also seems to support the idea of a biological critical period for human language acquisition.

On the other hand, since the early 1990s a handful of studies have identified post puberty, even adult, learners who appear to have attained a native like command of certain phonetic or morphosyntactic aspects of the L2. These studies have indeed been used to argue that the typical differences between child and adult learners' success should instead be attributed to social, psychological, and educational factors to the development of formal operations to a general cognitive decline and sensory acuity or to effects of bilingualism. The results of the studies should qualify as solid evidence of the robustness of aptitude effects in SLA.

CONCLUSION

Through the above analysis, it is hoped that this paper has demonstrated that the concept of foreign language aptitude is still a viable and necessary concept for language learning and SLA research. More importantly, the present paper has shown that, besides being able to compensate for the limitations in previous foreign language aptitude research (Carroll's time), the prospect of incorporating WM as a key component in foreign language aptitude is possible, feasible and promising indeed.

One conclusion to be drawn from previous studies of different learning conditions and their relationship to aptitude is that while conventional measures of aptitude are suitable for predicting successful learning during some conditions of exposure and practice they also need to be supplemented by other measures (such as WM), especially where the instructional condition involves processing for meaning alone, with no intentional focus on form.

The validity of aptitude tests as theoretically motivated measures of fine-grained SLA processes is thus prioritized in this approach to aptitude test design and development in contrast to the traditional concerns of parsimony, i.e., have as few subtests as possible, and so pragmatism, i.e. ensure brevity of administration that different types of cognitive aptitudes have differential effects on long-term L2 outcomes. A broad distinction was made between explicit and implicit language aptitudes in an attempt to address the main limitation of conventional language aptitude measures, which have been heavily weighted in favour of explicit processes.

Finally, it would be very informative to investigate aptitude profiles in aptitude-treatment interaction studies. It would be interesting to investigate these different profiles in other populations of very advanced adult L2 learners in either immersion or instructed language contexts. Research is needed into these in order to identify 'complexes' of abilities or 'aptitudes' for 'types' of situated pedagogic activity. An aptitude battery that assessed strengths and weaknesses in such complexes would be of great diagnostic value in matching learners to optimal learning contexts. Currently available aptitude tests cannot be used to this end, and so new aptitude batteries must be developed. It is only natural that as research in these fields' progresses we should turn our attention to revising the not-so-Modern Language Aptitude Test, and others, and hopefully this will be done in the coming years ahead.

REFERENCES

- Rysiewicz, J. (2008). Measuring foreign language learning aptitude: polish adaptation of the MLAT. *Poznań Studies in Contemporary Linguistics*, 44(4), 569–595. <http://Doi.Org/10.2478/V10010-008-0027-6>
- Robinson, P. (2009.). Individual differences, aptitude complexes, SLA processes and aptitude test. *Journal of Educational Development*, 1(3), 57–75. <http://Doi.Org/10.1007/978-3-642-20850-8>
- Robinson, P. (2001). Individual differences, cognitive abilities, aptitude complexes and learning conditions in second language acquisition Aoyama Gakuin University. *Second Language Research* 17(1), 368-378.
- Skehan, P. (2002). Theorizing and updating aptitude. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 69-93). Cambridge: Cambridge University Press.
- Wen, Z., & Skehan, P. (2011). A new perspective on foreign language aptitude research: Building and supporting a case for working memory as language aptitude. *A Journal of English Language, Literatures in English and Cultural Studies*, 60, 15-44.